REMARKS

In the Official Action mailed on **7 September 2006**, the Examiner reviewed claims 1, 3, 5-10, 12 and 14-20. Claims 1-3, 5-6, 8-12, 14-15, and 17-20 were rejected under 35 U.S.C. §102(e) as being anticipated by Ang (USPN 2003/0079085, hereinafter "Ang"). Claims 7 and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ang as applied to claims 1-3, 5-6, 8-12, 14-15, and 17-20.

Rejections under 35 U.S.C. §102(e) and 35 U.S.C. §103(a)

Claims 1-3, 5-6, 8-12, 14-15, and 17-20 were rejected as being anticipated by Ang.

Applicant respectfully points out that the present invention teaches switching a cache-line to the write-broadcast protocol if the number of updates on that cache line exceeds a certain threshold, and **to revert the cache line back to the write invalidate protocol if the cache line is later not accessed frequently by multiple processors**. Switching back to the write invalidate protocol is beneficial because the write-broadcast protocol provides no advantage when the cache line is not accessed frequently by multiple processors, and in a large multiprocessor system where many processors can potentially perform write operations at the same time, performance on the system bus may degrade with the updates performed after each write by the write-broadcast protocol (see paragraph [0010] of the instant application).

In contrast, Applicant respectfully submits that Ang teaches maintaining cache coherence with the invalidation approach only when the cache line is written to by a solo cache (see paragraph [0048] of Ang). Thus, when a few processors are occasionally writing to the cache line, Ang teaches that the update approach is in effect even if there is not active contention for that cache line.

Accordingly, Applicant has amended independent claims 1, 10, 19, and 20 to include limitations from dependent claims 3, 5-6, 11, and 13-14 to clarify that the present invention teaches reverting to the write invalidate a protocol from the write broadcast when a given cache is not accessed frequently by multiple processors. Dependent claims 3, 5-6, 11, and 13-15 have been canceled without prejudice. These amendments find support in paragraphs [0010] of the instant application. No new matter has been added.

Hence, Applicant respectfully submits that independent claims 1, 10, 19, and 20 as presently amended are in condition for allowance. Applicant also submits that claims 7-9, which depend upon claim 1, and claims 16-18, which depend upon claim 10, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

CONCLUSION

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

By   _[signature]_

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